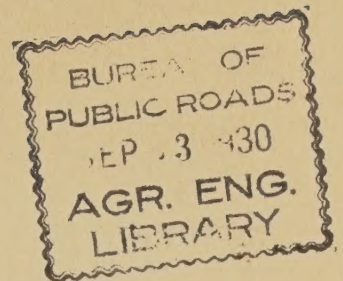


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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING



MONTHLY NEWS LETTER

Washington, D. C., Sept. 20, 1930.

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: MEMORANDUM No. 599 of the Office of the Acting Secretary calls:
: attention to the fact that all employees of the Department P
: authorized to operate their personally owned automobiles on :
: the mileage basis will, hereafter, in addition to such mileage:
: be allowed charges for tolls and ferriage, storage and towage :
: incurred in connection with the authorized use for official :
: travel of such personally owned automobiles or motorcycles. :
:.....
:
: Vouchers are being received in this office covering services :
: and supplies for and repairs to Government owned property and :
: equipment which do not include the information that such ex- :
: penditures were made in connection with Government owned :
: equipment. It is requested that this information be shown on :
: all vouchers of the character referred to. In the case of :
: vouchers covering supplies and services for specific auto- :
: motive equipment, the character of vehicle and the Bureau :
: number should be stated as heretofore. :
:.....
:
: Attention is called to the fact that telegrams relating to :
: annual leave are not official telegrams. Employees who send :
: such telegrams as official must be prepared to receive re- :
: quests to reimburse the Government for them. :
: Telegrams relating to pay checks are not official unless the :
: funds involved are necessary for the proper conduct of :
: official business. :
:.....

The Washington office is now located at 1300 Pennsylvania Avenue.
Visitors should report to room 206. Mail should be addressed as heretofore to the Bureau of Public Roads, Washington, D. C., not to 1300 Pennsylvania Avenue.

Mr. McCrory made a trip to Auburn, Ala. early in September to confer with Dean Funchess, Director of the State Experiment Station and with Mr. Randolph with regard to the latter's project on cotton growing machinery. From Auburn Mr. McCrory proceeded to Houma, La. to consult with B. O. Childs regarding his project on the drainage of sugar cane lands. He then went to Jeanerette, La. to confer with Mr. Dodson of the Bureau of Animal Industry regarding the forage crop drying project being conducted by W. M. Hurst. On his return trip he visited Stoneville, Miss. to inspect progress on the construction of the experimental cotton gin by Charles A. Bennett.

Dr. Samuel Fortier was retired Aug. 31, 1930, thus bringing to an official close a service to the Government begun 36 years ago. From 1894 to 1903 he was employed on a part time basis first by the U. S. Geological Survey and afterwards by the Irrigation Investigations of the Office of Experiment Stations. Since 1903, his services have been devoted continuously to this Department. Upon request Dr. Fortier has submitted the following regarding his most recent work:

"Upon being relieved of all administrative duties at the age of 70, I undertook and have practically completed a task of greater scope and economic importance than any I had previously undertaken in the way of preparation of bulletins. This task was the writing of a series of five bulletins on water requirements of the different basins of the Western States. The subject is important because it pervades irrigation in all its phases, having to do with water rights; the equitable apportionment of public water supplies; the determination of capacity of canals, pumps, reservoirs, and irrigation works in general; the prevention of waste and the attainment of the highest possible efficiency; determination of the permissible cost of reclamation that can safely be undertaken with a known water supply; and the maintenance and control of soil moisture in such a way as to produce profitable yields of crops. In this series of bulletins the available water supply of the 17 Western States is tentatively allotted to the arid and semiarid lands of this area. The data on which these reports were based had to be gleaned from scores of file reports and other sources, some of which were 25 or more years old. These results had to be incorporated into the story of the rise and progress of irrigated agriculture in the West in such a manner as to set forth not only the achievements of the past but the possibilities of the future, in making a wise and continued use of the land and water resources."

Dr. Fortier has written and revised other bulletins during the past five years, having in all 9 publications to his credit as author or co-author for work performed during this period.

W. W. McLaughlin returned to Berkeley Sept. 6 from an extended field trip through various Western States, including Utah, Idaho, Montana, and Oregon, and was joined by Mr. McCrory in northern Idaho and again in Utah.

Messrs. Blaney, Taylor, and Young submitted progress reports covering investigations in southern California for the fiscal year ending June 30.

Wells A. Hutchins completed a "Summary of Principal Topics Covered by Irrigation Districts Statutes of Western States." It is expected this

compilation will be published by the State Department of Public Works of California.

F. J. Fricke was transferred from work in southern California to the cooperative work in Texas under Mr. Faris.

M. R. Lewis submitted a brief progress report on the cooperative irrigation and drainage investigations in Baker and Medford, Oreg.

S. H. Beckett completed a progress report on Duty of Water on Citrus and Walnut Crops, Riverside and San Bernardino counties, Calif., for the season of 1930.

Colin A. Taylor reports the development of an apparatus to show the hourly use of water from a tank of reeds and swamp growth. A continuous record was obtained throughout August. The minimum demand usually occurred about 7:00 a.m. and was at the rate of less than 0.1 inch depth per day. The maximum demand occurred shortly after noon and was at the rate of over 3.0 inches depth per day, on clear days.

R. L. Parshall states that the Municipal Water Board of Denver has asked his station to suggest a design of the improved Venturi flume suitable for measuring about 1,300 second-feet as a transcontinental diversion through the Moffat water tunnel.

Carl Rohwer carried on experiments for a period of 30 days on East Park Reservoir of the Orland Project, to determine the relation between the evaporation from this reservoir and that from the standard types of evaporation pans. The results of these observations are in close agreement with the work done at Fort Collins, Colo. The results also agree with the work of Reuben B. Sleight at Denver, except in the case of the floating pan, Sleight having found a greater difference between the floating pans and similar land pans.

The structures section has the following service jobs in progress under the direction of A. H. Senner: Replacing one of the main boilers at the Bell Station of the Foreign Plant Introduction, installing additional radiation and new boilers at the Beltsville Experiment Farm, installing mechanical equipment for a poultry laboratory at the Beltsville farm, and installing vacuum pumps at the Arlington Experiment Farm.

M. A. R. Kelley has returned from a field trip covering about 8,500 miles in the corn belt in connection with his study of grain storages in that region and is now engaged in preparing the manuscript for a bulletin giving the results of this investigation. His bulletin on Farm Bulk Storage of Small Grain will be issued within a few weeks as Farmers' Bulletin 1636.

In connection with the Mississippi Flood control work T.A.H. Miller has worked up a system of appraisal to be used in determining the approximate value of dwellings in Southern Arkansas and Louisiana. A basic cubic foot value of \$.041, which represents the cost of a very plain unpainted

house without windows, plumbing etc. is used for all dwellings. To this cost are added certain adjustments depending upon the materials used, such as drop siding, painting, various types of roof covering, windows, style of interior finish and conveniences. The adjustments are based on the average cost of materials and labor within the areas considered. This method permits the cost of dwellings, having a wide variety of details, to be quickly estimated with an accuracy commensurate with the project.

R.B. Gray spent August 27 to 29 at the Washington office, conferring on matters pertaining to farm machinery and corn borer control.

Thayer Cleaver spent August 25 and 26 in Toledo discussing, with the various engineers, the changes made on control machinery during the past year and conferring on the cooperative work he is conducting with the University of Illinois Experiment Station at Urbana.

G. E. Ryerson left September 3 with a truck load of machinery, including a low-cutting binder and a stalk shaver, to assist in corn borer machinery demonstration and development work in the New England States.

Frank Irons left September 4 for New England to supervise the corn borer machinery demonstration work arranged for in that area and to continue experimental and development work at the Berkley farm.

D. B. Eldredge went to State College, Pa., on September 7 for a few days to assist in cooperative work on low-cutting binders.

All hands at Toledo are rushing to completion machinery and equipment construction and plans for the corn borer control field conference to be held there September 24 and 25.

C. E. Ramser has furnished the following information regarding the soil erosion projects:

Everett E. Stewart of Los Angeles, Calif. was appointed to the position of Assistant Civil Engineer effective Sept. 3 and reported for duty at Guthrie, Okla.

C. K. Shedd has completed the construction of about 5,800 feet of terraces for an experiment on the Bethany farm where a comparison will be made of run-off and erosion losses for a terraced and an unterraced area farmed according to usual practices.

R. W. Baird reports that four bales of cotton has been picked, ginned and marketed to date on the Tyler farm.

From records on the cost of constructing terraces on the Hays farm submitted by R. R. Drake and compiled in the Guthrie Office, the following data on the average cost has been prepared. The average cost of building 6,120 feet of terraces with an average height of 0.94 feet and a base width of 30 feet where the dirt was moved from both sides amounted to \$25.89 per mile or \$1.46 per acre; the cost of 6,146 feet of terraces with a height of 1.13 feet and a width of 30 feet where practically all of the dirt was moved from the upper side amounted to \$37.48 per mile or \$2.84 per acre. Although the height of the terrace built from the upper side is slightly greater it is not enough greater to account for the greater difference in cost and it appears that it is cheaper to build a terrace on comparatively flat land by moving the dirt from both sides. The greater distance that the dirt must be moved when taken from one side only no doubt accounts for this greater cost. The cost of 6,595 feet of terrace with a height of 1.06 feet and a base width of 40 feet where the dirt was moved from both sides was \$40.02 per mile and \$2.29 per acre. The slope of the land where these terraces were built varied from almost level to 4 per cent.

